

BZU3 Hydronic Zoning Control
Self-Contained Interoperable Controller Model UCP-1

SUPERSEDES: November 30, 2012

EFFECTIVE: December 31, 2012

Plant ID: 001-4069

BZU3

The BZU3 is a self-contained microprocessor-based controller for up to 4 radiant heating zones.

Overview

The BZU3 is a hydronic heating zone controller capable of regulating floor and space temperature for up to four zones. Each zone has two analog inputs: one for Floor Temperature and one for Space Temperature. These inputs may be standard Precon III thermistors, but are also compatible with the TS20X-series thermostat so that each zone's setpoint may be overridden by the user. One zone may also be designated the master zone in the Zone Settings menu, and thus provides heat/cool and fan on/off/auto information to the BZU3 and associated DXU3 or DXU4. Each zone has a digital output and a modulating output. These outputs may be used for valves or circulators. There are also digital outputs for two Group Circulators, one Primary Circulator and Heat Demand. An outside air temperature input may be used with a Precon III thermistor.

The controller is based on LONWORKS[®] networking technology. The controller communicates with the BLM, DXU, and HPM series controllers over the network. The controller can also be networked to a higher-level control system for monitoring and control applications.

Features

- Control of up to four heating zones with individual sensor inputs and isolated outputs
- Individual temperature setpoints for occupied heating of each zone
- Common temperature setpoint for unoccupied heating
- Proportional plus integral (P+I) control of heating
- Heat Demand output for a common pump or non-networked heat source
- Heat Demand communicated to a BLM series boiler controller or HPM heat pump master controller
- Outdoor Air Cutoff temperature for warm weather shutdown
- TS20X thermostat information communicated to DXU controllers
- Automatic configuration with a Local Control Interface (LCI) touchscreen
- Alarm/Event Reporting

SPECIFICATIONS

Electrical

Inputs

- Cabling: twisted shielded pair, 18 AWG recommended—500 feet max. (152 meters)

- Resolution: 10 bit
Zone 1/2/3/4 Air Temperature, Zone 1/2/3/4 Floor Temperature
- Precon Type III 10K thermistor or TS200-series
Outdoor Air Temperature
- Type III 10K thermistor

Outputs

Zone 1/2/3/4 Modulating Output

- 0-10 VDC
Heat Demand Circulator, Primary/Group 1/Group 2 Circulator, Zone 1/2/3/4 Out
- 24 VAC
- 1A @ 50C, 0.5A @ 60C, limited by the Class 2 supply rating

Power

Power Requirements

- 24VAC (20VAC to 28VAC), requires an external Class 2 supply

Power Consumption

- 7.2W with no external loads, maximum limited by the class 2 supply rating

Recommended Sensor Wire

Cable Type	Pairs	Details	Taco Catalog No.
18AWG	1	Stranded Twisted Shielded Pair, Plenum	WIR-018

FTT-10A Network

- Speed: 78KBPS
- 42.4 Volts DC max
- Cabling: Maximum node-to-node distance: 1312 feet (400 meters)
- Maximum total distance: 1640 feet (500 meters)

Cable Type	Pairs	Details	Taco Catalog No.
Level 4 22AWG (0.65mm)	1	Unshielded, Plenum, U.L. Type CMP	WIR-022

For detailed specifications, refer to the *FTT-10A Free-Topology Transceiver User's Guide* published by Echelon Corporation (www.echelon.com/support/documentation/manuals/transceivers).

Mechanical

Housing

- Dimensions: 5.55" (141mm) high, 6.54" (166 mm) wide, 1.75" deep (44 mm)
- ABS

Weight

- Controller Weight: 0.70 pounds (0.32 kilograms)
- Shipping Weight: 1.0 pounds (0.46 kilograms)

Electronics

- Processor: 3150 Neuron 10 MHz
- Flash: 48 Kilobytes
- SRAM: 8 Kilobytes
- Termination: 0.197" (5.0 mm) Pluggable Terminal Blocks, 14-22 AWG

Environmental

- Temperature: 32 °F to 140 °F (0 °C to 60 °C)
- Humidity: 0 to 90%, non-condensing

Agency Listings

- UL Listed for US and Canada, Energy Management Equipment PAZX and PAZX7.

Agency Compliances

- FCC Part 15 Class A

CONTROLS MADE EASY®

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